

Work Order ID 120136

Wednesday, June 04, 2014 2:56:41 PM

120136

Page 1

Item ID: D3393-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Battery Lock Casing

Stop

NS2

Start Date: 6/04/14 Start Qty: 12.00

12

Cust Item ID:

Required Date: 6/04/14 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: ML5Date: 14-06-05 Tooling:

Date:

Run Start

NR1

QC: _____

Date: _____ SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3393	Rev A								

100

100

BAND SAW

Bandsaw

Jeaspa Bandsaw

Memo

0.00

0.00

Cut blank: 1.500" x 1.500" x 3.125" long

13 Ø DAS 37 9-89 14-07-03

110

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

HAAS CNC vertical machine #1

Memo

0.00

Machine D3393-1 as per Folio FA510 and Dwg D3393 Identify as D3393-1

Deburr

DAS

44

9-89

120

120

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Quality Control

Memo

0.00

13 Ø DAS 44 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear	General										
	Bending <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>					Pressure/Forced <input type="checkbox"/>			
	Centre Not Concentric <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>					Set-up <input type="checkbox"/>			
	Cracks <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>					Temperature/Cure <input type="checkbox"/>			
	Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>					Weld <input type="checkbox"/>			
	Cuffs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>					Wrong Stock Pulled <input type="checkbox"/>			
	Crushing <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>								
	Heat Treat <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>								
	Inspection Strip in Tube <input type="checkbox"/>	Misread <input type="checkbox"/>									
	Marks/Chatter <input type="checkbox"/>	Off-set <input type="checkbox"/>									
	Turning Sequence <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>									
	Wave/Twist in Tube <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>									

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Page 2

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Cust Item ID:

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Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Quality Control

13

Ø

M4

14/07/07

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Hand Finishing

0.00

13

7/6/14-7-9

150

Fire Red(Ref:4.3.5.10) per QSI005 4.3

0.00

150

Powdercoat

Powder Coating

128959

0.00

START TIME: 10:20 OVEN TEMPERATURE:
320° FINISH TIME: 10:50

13

Ø

Ø

14-7-28

DAS

41

9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear a: Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Inspection Strip in Tube Marks/Chatter Turning Sequence Wave/Twist in Tube				General Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function <input type="checkbox"/>			Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/>			Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other <input type="checkbox"/>	
Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/>											

Work Order ID 120136

Wednesday, June 04, 2014 2:56:41 PM

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Page 3

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Cust Item ID:

Required Date: 6/04/14 Req'd Qty: 12.00

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC3- Inspect Part Finish

0.00

160

QC

Quality Control

Bmbs
14/7/2014

13

170

Identify as per dwg & Stock Location: 57501

0.00

170

Packaging

Packaging

Memo

0.00

13X

DAS
28
9-89

JUL 29 2014

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Quality Control

Memo

0.00

14/7/2014

RJ-7.29

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

Work Order: _____
 Part No. _____
 NCR No. _____

DISPOSITION

Rework
Scrap
Use-as-is
Suspected Unapproved

Skid-tube
Machining
Thermoforming
Large Fab

AGAINST DEPARTMENT/PROCESS

Crosstube
Small Fab
Finishing
Composite

Water Jet
Prod. Eng. Coor.
Rec/Store/Packaging
Supplier

Engineering
Quality
Other

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General			
	Bending	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>
	Centre Not Concentric	<input type="checkbox"/>	Grain	<input type="checkbox"/>
	Cracks	<input type="checkbox"/>	Hardware	<input type="checkbox"/>
	Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>
	Cuffs	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>
	Crushing	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>
	Heat Treat	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>
	Inspection Strip in Tube	<input type="checkbox"/>	Misread	<input type="checkbox"/>
	Marks/Chatter	<input type="checkbox"/>	Off-set	<input type="checkbox"/>
	Turning Sequence	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>
	Wave/Twist in Tube	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>

Picklist Print

Wednesday, June 04, 2014 2:56:41 PM

Page 1

Work Order ID: 120136

120136

Parent Item: D3393-1

D3393-1

Parent Item Name: Battery Lock Casing

Start Date: 6/04/14

Required Date: 6/04/14

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP A05.02.18New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.500X01.50 0		Purchased		No		100	f	55.3125	0.2708	4		DAS 37 9-89	14-07-03

M6061T6R1 500X01 500

6061-T6 Bar 1.50 x 1.50

Location	Loc Qty	Loc Code
MAT003	55.3125	
M126043	32.3125	
M126075	23	4ft.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS			
Part No. _____	Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
NCR No. _____					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General			
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>
	Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>
	Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Set-up <input type="checkbox"/>
	Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Weld <input type="checkbox"/>
	Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>
	Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	
	Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>	
	Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>	
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>	
	Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	

DART AEROSPACE LTD	Work Order:	1Z0136
Description: Battery Lock Casing	Part Number:	D3393-1
Inspection Dwg: D3393 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.750	+0.010/-0.000	.7585	/		Vern	FK-04
0.625	+0.010/-0.000	.6345	/		"	"
Ø1.250	+/-0.010	1.2525	/		"	"
1.088	+/-0.010	1.090	/		"	"
Ø0.734	+/-0.010	.735	/		"	"
2.658	+/-0.010	2.658	/		"	"
1.550	+/-0.010	1.550	/		"	"
0.125 x 45°	+/-0.010 x 0.5°	.125 x 45°	/		"	"
1.50	+/-0.030	1.491	/		"	"
0.750	+/-0.010	.745	/		"	"
Ø1.050	+/-0.010	1.050	/		"	"
Ø1.000	+/-0.010	1.001	/		"	"
0.338	+/-0.010	.338	/		"	"
0.563	+/-0.010	.566	/		"	"
0.100	+0.000/-0.010	.097	/		"	"
3.00	+/-0.030	3.002	/		"	"
1.500	+/-0.010	1.500	/		"	"
0.375	+/-0.010	.373	/		"	"
1.25	+/-0.030	1.248	/		"	"
0.125	+/-0.010	.118	/		"	"
30°	0.5°	.30°	/		A-G	

DAS

Measured by:	44 9-89	Audited by:	14	Prototype Approval:	N/A
Date:	14/07/05	Date:	14/07/07	Date:	N/A

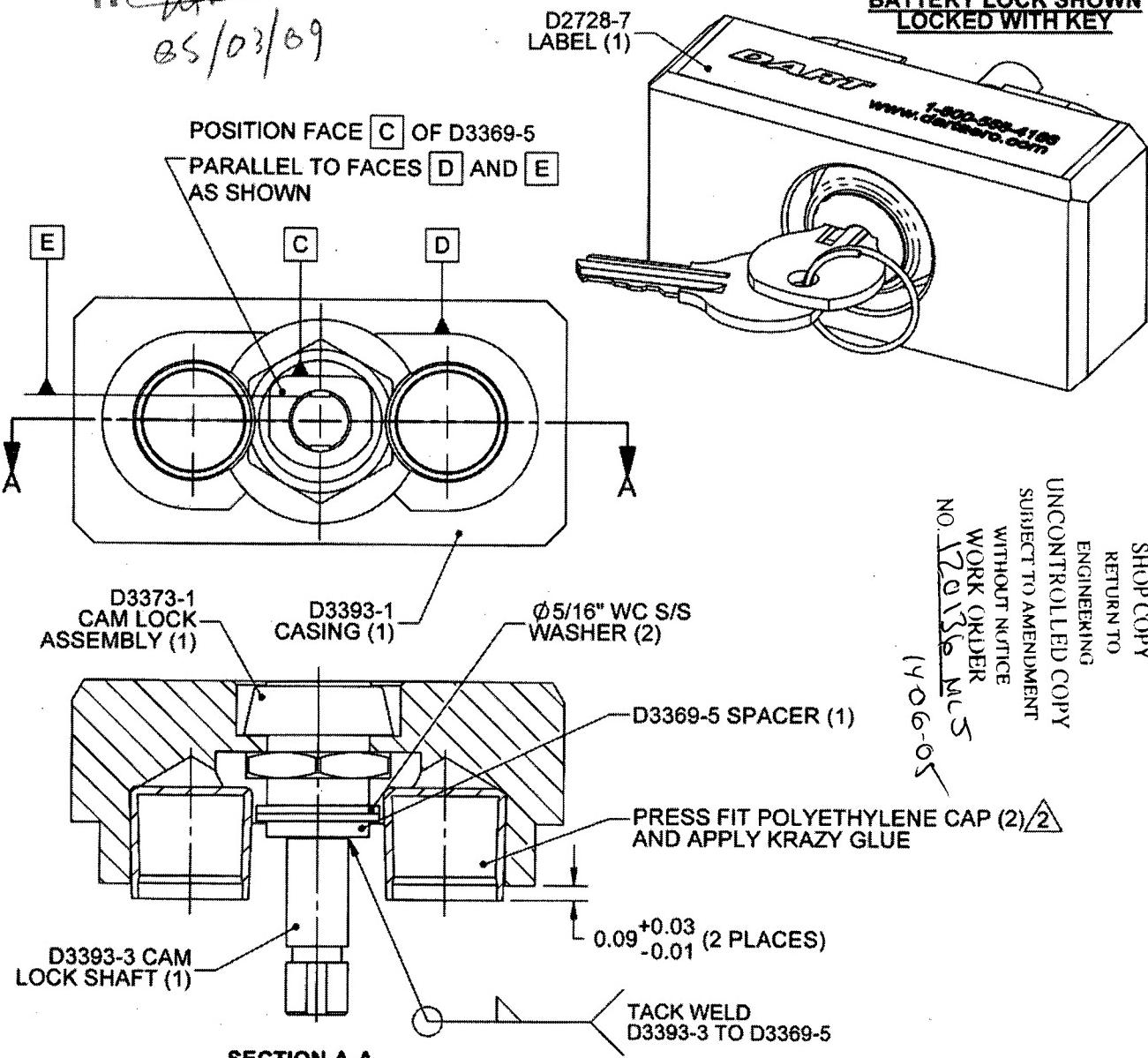
Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue	KJ/JLM	
B	08.11.28	Tolerances revised	KJ/EC	



DESIGN <i>b3</i>	DRAWN BY <i>b3</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>b3</i>	APPROVED <i>b3</i>	DRAWING NO. D3393	REV. A SHEET 1 OF 3
DATE 05.02.08		TITLE BATTERY LOCK	SCALE 1:1
A	05.02.08	NEW ISSUE	

RELEASED
[Signature]

05/03/09



SECTION A-A

D3393-041 BATTERY LOCK ASSEMBLY

NOTES:

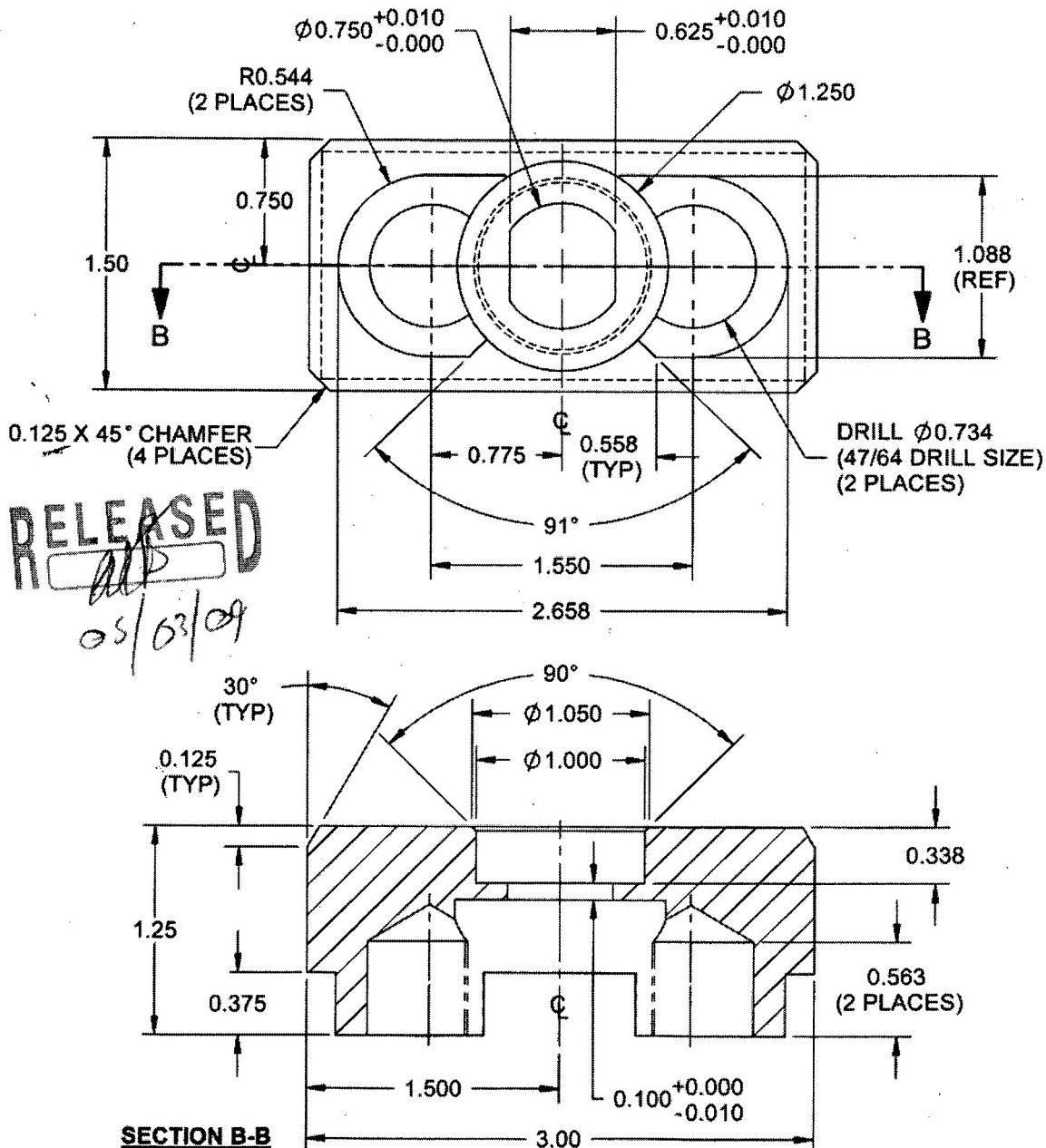
- 1) WELD PER DART QSI 004
- 2) POSSIBLE SUPPLIER: McMaster-Carr, P/N 9567K21

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DESIGN 13	DRAWN BY 13	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED TT	APPROVED MM	DRAWING NO. D3393	REV. A SHEET 2 OF 3
DATE 05.02.09	TITLE BATTERY LOCK	SCALE 1:1	



D3393-1 CASING

NOTES:

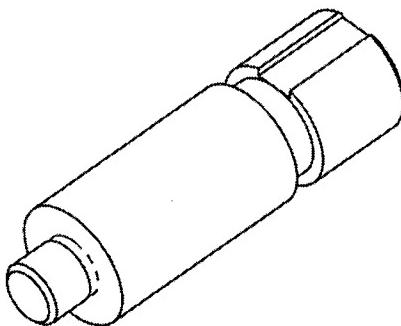
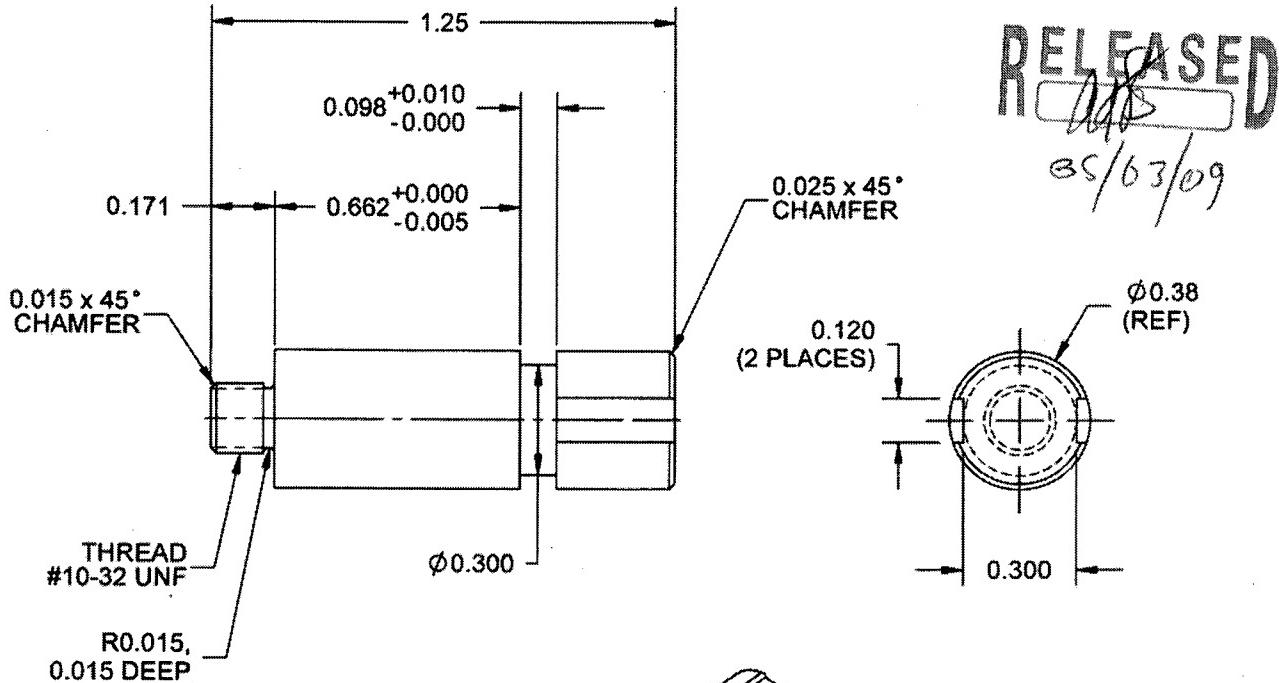
- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-225/8)
(REF. DART SPEC. M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3393	REV. A SHEET 3 OF 3
DATE 05.02.09	TITLE BATTERY LOCK	SCALE 2:1	



D3393-3 CAM LOCK SHAFT

NOTES:

- 1) MATERIAL: AISI 303 S.S. (REF. DART SPEC. M303R0.375)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010